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Datasheet for ABIN3088672

**alpha Actinin 4 Protein (AA 1-911) (Strep Tag)**

## Overview

Quantity:	1 mg
Target:	alpha Actinin 4 (ACTN4)
Protein Characteristics:	AA 1-911
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This alpha Actinin 4 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

## Product Details

Sequence:	MVDYHAANQS YQYGPSSAGN GAGGGGSMGD YMAQEDDWDR DLLLDPWEK QQRKTFTAWC NSHLRKAGTQ IENIDEDFRD GLKLMLLLEV ISGERLPKPE RGKMRVHKIN NVNKALDFIA SKGVKLVSIG AEEIVDGNK MTLGMIWTII LRFAIQDISV EETSAKEGLL LWCQRKTAPY KNVNVQNFHI SWKDGLAFNA LIHRHRPELI EYDKLRKDDP VTNLNNAFEV AEKYLDIPKM LDAEDIVNTA RPDEKAIMTY VSSFYHAFSG AQAETAANR ICKVLAVNQE NEHLMEDYEK LASDLLEWIR RTIPWLEDVR PQKTIQEMQQ KLEDFRDYRR VHKPPKVQEK CQLEINFNTL QTKLRLSNRP AFMPSEGKMV SDINNGWQHL EQAEKGEEW LLNEIRRLER LDHLAEKFRQ KASIHEAWTD GKEAMLKHRD YETATLSDIK ALIRKHEAFE SDLAHQDRV EQIAAIAQEL NELDYYDSHN VNTRCQKICD QWDALGSLTH SRREALEKTE KQLEAIDQLH LEYAKRAAPF NNWMESAMED LQDMFIVHTI EEIEGLISAH DQFKSTLPDA DREREAILAI HKEAQRIAES NHIKLSGNSP YTTVTPQIIN SKWEKVQQLV PKRDHALLEE QSKQQSNEHL RRQFASQANV VGPWIQTKME EIGRISIEMN GTLEDQLSHL KQYERSIVDY KPNLDLLEQQ HQLIQEALIF
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DNKHTNYTME HIRVGWEQLL TTIARTINEV ENQILTRDAK GISQEQMQEF RASFNHFDKD  
HGGALGPEEF KACLISLGYD VENDRQGEAE FNRIMSLVDP NHSGLVTFQA FIDFMSRETT  
DTDTADQVIA SFKVLGADKN FITAEELRRE LPPDQAEYCI ARMAPYQGPD AVPGALDYKS  
FSTALYGESD L

**Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

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### Characteristics:

#### Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

#### Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

#### Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

## Product Details

- We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):  1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE. 2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.
Purity:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

## Target Details

Target:	alpha Actinin 4 (ACTN4)
Alternative Name:	ACTN4 ( <a href="#">ACTN4 Products</a> )
Background:	Alpha-actinin-4 (Non-muscle alpha-actinin 4),FUNCTION: F-actin cross-linking protein which is thought to anchor actin to a variety of intracellular structures. This is a bundling protein (Probable). Probably involved in vesicular trafficking via its association with the CART complex. The CART complex is necessary for efficient transferrin receptor recycling but not for EGFR degradation (PubMed:15772161). Involved in tight junction assembly in epithelial cells probably through interaction with MICALL2. Links MICALL2 to the actin cytoskeleton and recruits it to the tight junctions (By similarity). May also function as a transcriptional coactivator, stimulating transcription mediated by the nuclear hormone receptors PPARG and RARA (PubMed:22351778). {ECO:0000250 UniProtKB:P57780, ECO:0000269 PubMed:15772161, ECO:0000269 PubMed:22351778, ECO:0000305 PubMed:9508771}.
Molecular Weight:	104.9 kDa
UniProt:	<a href="#">O43707</a>
Pathways:	<a href="#">Proton Transport</a>

## Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies
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## Application Details

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as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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### Comment:

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### Restrictions:

For Research Use only

## Handling

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### Format:

Liquid

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### Buffer:

The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

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### Handling Advice:

Avoid repeated freeze-thaw cycles.

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### Storage:

-80 °C

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### Storage Comment:

Store at -80°C.

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### Expiry Date:

Unlimited (if stored properly)